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Applicants: Carlsson

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Title: Wireless Network Architecture and Protocol
for Location Services in GPRS Packet Data
Network

Examiner: Mr. Justin M. Philpott

Group Art Unit: 2665

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this Reply Brief is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on Monday, December 20, 2004.

The Reply Brief is responsive the Examiner's Answer mailed October 18, 2004, having a due date of Saturday, December 18, 2004. Hence, this Reply Brief is timely filed.

Edward H. Green, III

REPLY BRIEF

In the Appeal Brief, Applicant included a simple block diagram, as an aid for the Board in understanding the invention. In introducing Figure A, Applicant clearly stated it is distinct from any drawing figure in the specification, "The location services information routing of the present invention is further explained with reference to Figure A below, which depicts only the relevant nodes of a GSM network 30, as depicted in Figure 1 of the Specification." An accompanying footnote explained the inclusion of the unrelated HLR. Figure A introduced no "new communication indicators," and certainly no "entirely new communication," as the Examiner asserted in the Answer. The dotted-line communication paths of Figure 1 are prior art – they represent the most straightforward path of communication from a location server to a GPRS

serving node to a base station and transmission to a mobile station. The dotted-line, prior art communication paths were presented as being in contrast to the solid-line communication paths of the present invention (the point being to show the non-intuitive, nonobvious message routing of the present invention). The solid line communication paths are fully supported by the specification (see, e.g., Figures 7-9, where it is well known by those of skill in the art that communication from a SGSN to a MS must be via a BSS). Furthermore, they are explicitly recited in claim 1: transmitting from a location server to a base station, from the base station to a GPRS support node, and from the GPRS support node to a mobile station (and thus necessarily back through the base station).

The Examiner's contentions, at p. 13 of the Answer, that Applicant attempted "to amend the figures and description in applicant's specification," or "to enter completely new figures as attempted by applicant in the brief by inserting new Figure A," are pure hyperbole. It is fundamental to patent practice and procedure that text and figures in an Appeal Brief cannot and do not amend the specification. All network nodes in Figure A of the Appeal Brief appear in Figure 1 of the specification; Figure A merely deletes those that are irrelevant to the claims, to provide a simpler view of the portion of the network in which the claimed invention is operative. All solid-line communication paths in Figure A flow directly from claim 1. The dotted-line communication paths to which the Examiner so strenuously objects are prior art, and clearly labeled as such.

The Examiner makes much of the fact that Applicant labeled the location server 38 in Figure A as "location server 38 (SMLC)." Claim 1 recites a "location server," and Applicant labeled block 38 in Figure A correspondingly, to provide the Board a diagrammatic analog to the claim language. To avoid any possibility of confusion, and to maintain precise technical correspondence of Figure A to the specification, Applicant additionally and unambiguously denoted the location server by the acronym SMLC. Applicant defined the two terms as synonymous in the specification, at p. 6, lines 3-6: "The SMLC 38 manages the overall

coordination and scheduling of resources required to perform positioning of a mobile station 80 and is therefore sometimes referred to as the location server.” One such “sometime” is in claim 1. As explained in the Appeal Brief, the term “location server” is defined as a network element that manages the overall coordination and scheduling of resources required to perform positioning of a mobile station.

Furthermore, Applicant has consistently used the term “location server” throughout the prosecution history of the instant application, including the Response to Office Action of July 9, 2003, mailed August 12, 2003; the Response to Office Action of October 31, 2003, mailed December 23, 2003; the Response to Final Office Action of March 10, 2004, mailed on June 7, 2004. For the Examiner to contend that Applicant has *changed* the term location server only in the Appeal Brief is ludicrous (emphasis in Answer, p. 3).

Regarding the Examiner's characterization of Applicant's claims at pp. 7-8, the Examiner correctly states that claim 1 “recites a path of transmission from the [location] server to a base station, then to a [GPRS] support node, and finally to the mobile device.” What the Examiner glosses over, however, is that a specific, particular message is claimed: a location service message (as defined in the specification at p. 7, line 18 – p. 8, line 3). Also, this location service message claimed to be transmitted among specific, defined network nodes, in a specific order: e.g., from a location server (as defined in the specification at p. 6, lines 3-6), to a base station subsystem, to a serving GPRS support node, and then to a mobile station, in claim 1. Claim 13 similarly recites transmitting a specific message among specific nodes in a specific order: from a location server (as defined in the specification at p. 6, lines 3-6), to a base station subsystem, to a serving GPRS support node, and then to a LMU (as defined at p. 7, lines 4-9). The Examiner's contention, at p. 16, that he is free to interpret “LMU” as a generic mobile station is untenable. Claim interpretation must be consistent with the interpretation by one of skill in the art. MPEP § 2111.

The advantage of the claimed method is that by taking the novel and nonobvious path through the network, the location server may readily take advantage of well-defined circuit-switched protocols, while newer packet-switched protocols are being developed. However, the transmission of the claimed messages between the claimed nodes in the claimed order is itself novel and nonobvious in light of the art of record, for reasons fully explained in the appeal brief and prosecution history.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.



Edward H. Green, III
Attorney for Applicants
Registration No.: 42,604

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P.O. Box 5
Raleigh, NC 27602
Telephone: (919) 854-1844